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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,087	02/16/2001	Soon-Sung Yoo	8733.405.00	3235

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EXAMINER
QI, ZHI QIANG

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/784,087	Applicant(s) YOO ET AL.	
	Examiner Mike Qi	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *6-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,163,356 (Song et al).

Claim 1, Song discloses (col.7, line 66 – col.9, line 41; Figs.7-8) that a liquid crystal display device comprising:

- substrate (101);
- thin film transistor (TFT) including a gate electrode (111), a source electrode (121), and a drain electrode (131) on the substrate (101);
- pixel electrode (141) electrically connected to the drain electrode (131);
- data line (123) electrically connected with the source electrode (121);
- gate insulating layer (117) (first insulating layer), a pure amorphous silicon layer (133) and a doped amorphous silicon layer (135) sequentially layered under the data line (123);
- data pad (125) at one end of the data line (123);

- gate line (113) electrically connected with the gate electrode (111);
- gate pad electrode (115) at one end of the gate line (113);
- the gate pad electrode (115), especially the portion of the gate pad (115a, 115b), is directly on the gate insulating layer (117), and the gate insulating layer (117) includes an opening (159) that exposes a portion of the gate line (113), and the gate pad electrode (115) electrically contacts the exposed portion of the gate line (113), especially the portion of the gate pad (115a, 115b) is overlaps the gate insulating layer (117).

Claim 2, Song discloses (col.9, lines 23-25) that the pixel electrode (141) is formed of transparent conductive material such as ITO (indium tin oxide).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-20 of U.S. Patent Application No. 10/246,673 which is already allowed to issue.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims 1-5 have a corresponding limitations except for a few wording are different, but substantially they have the doctrine of obviousness-type double limitations.

Claim 1, concerning a liquid crystal display device comprising thin film transistor, and the gate pad electrode is formed directly on top of the first insulating layer such as the gate insulating layer, and the first insulating layer such as the gate insulating layer having an opening that exposes a portion of the gate line, and the gate pad electrode electrically contacts the exposed portion of the gate line and overlaps the fist insulating layer such as the gate insulating layer are covered by the claims 6-20 of the patent application 10/246,673 which is already allowed to issue. Such as the claim 9 of the patent application recites "a gate pad electrode on the gate insulating layer, and a gate pad contact hole passing through the gate insulating layer, wherein the gate pad electrode electrically connects the gate pad (the gate pad is connected to the gate line) via the gate insulating layer". So that the gate pad electrode overlaps the gate insulating layer.

Claim 2, concerning the pixel electrode is selected from the indium tin oxide (ITO) and indium zinc oxide (IZO) is covered by the claim 13 of the patent application

10/246,673 which is already allowed to issue, such as the pixel electrode is from a group consisting of indium tin oxide (ITO) and indium zinc oxide (IZO).

Claim 3, concerning the drain electrode has a though hole and the pixel electrode electrically contacts an inner side surface of the drain electrode via the though hole is covered by the claims 6 and 8 of the patent application 10/246,673 which is already allowed to issue, such as the drain contact hole through the exposed portion of the drain electrode, such that portions of the gate insulating layer are exposed, and the pixel electrode contact an inner side surface of the drain electrode via the drain contact hole.

Claim 4, concerning the data pad contact hole passing through the doped amorphous silicon layer and the amorphous silicon layer, and the data pad electrode electrically contacts an inner side surface of the data pad via the data pad contact hole is covered by the claims 9 and 12 of the patent application 10/246,673 which is already allowed to issue, such as the data pad contact hole passing through the silicon layer, and the data pad electrically contacts an inner side surface of the data pad via the data pad contact hole.

Claim 5, concerning the data pad electrode is comprised of same material as the pixel electrode (ITO or IZO) is covered by the claim 14 of the patent application 10/246,673 which is already allowed to issue, such as the data pad electrode is from a group consisting of indium tin oxide (ITO) and indium zinc oxide (IZO).

Respons to Arguments

5. Applicant's arguments filed on Mar.27, 2003 have been fully considered but they are not persuasive.

Applicant's **only** arguments are as follows:

1) The references do not disclose a gate pad electrode directly on the top of a first insulating layer and wherein the gate pad electrode electrically contacts the exposed portion of the gate line and overlaps the first insulating layer as claimed in claim 1.

Examiner's responses to Applicant's **only** arguments are as follows:

1) The reference Song discloses (col.7, line 66 – col.9, line 41; Figs.7-8) that the gate pad electrode (115), especially the portion of the gate pad (115a, 115b), is directly on the gate insulating layer (117), and the gate insulating layer (117) includes an opening (159) that exposes a portion of the gate line (113), and the gate pad electrode (115) electrically contacts the exposed portion of the gate line (113), especially the portion of the gate pad (115a, 115b) is overlaps the gate insulating layer (117).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (703) 308-6213.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mike Qi
April 15, 2003

TOAN TON
PRIMARY EXAMINER